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Obesity and asthma in schoolchildren

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Background: Asthma and obesity are major public health problems in childhood, but controversy remains regarding the mechanisms underlying this relationship. The aim of this study was to evaluate the association between asthma and obesity risk in schoolchildren.
Participants and methods: The study was performed using a convenience sample of 1962 Portuguese school children (49.8% girls), 5-10-year-old. Height and weight were measured according to international standards, and body mass index (BMI) was calculated. The definition of obesity was based on average centiles according to the International Obesity Task Force cut-offs. Children's parents completed a self-administered questionnaire, which provided information on general family background characteristics, children's dietary intake (using a semi-quantitative food frequency questionnaire) and asthma (based on the following question: "Have you ever been told by any doctor that your son had asthma?". Unconditional logistic regression models were fitted to estimate the magnitude of the association between asthma and obesity in children, adjusting for confounders (age and energy intake).
Results: The prevalence of obesity was 11.0% in girls and 14.0% in boys and the prevalence of asthma was 7.3% in girls and 11.0% in boys. Girls reporting asthma presented a two-fold risk for being obese (OR = 2.07, 95% CI 1.06-4.05, p trend = 0.05), even after further adjustment for confounders (OR = 2.16, 95% CI 1.10-4.24, p trend = 0.05). In boys, no association was found between asthma and obesity.
Conclusion: Asthma was positively associated with obesity in girls.

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Obesity remains underdiagnosed in english hospital in-patients

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Organised medical management of obesity in England remains poorly developed; hospitals are required as a performance standard to have reporting systems in place to identify in-patients with a BMI ≥ 27 with a co-morbidity or BMI ≥ 30. We have audited compliance with this performance standard in two hospitals. Notes and clinical records of all patients were inspected on sample medical, surgical and acute admission wards. Data on height, weight, BMI, waist circumference, clinical statement about body habitus, and current prescription of drugs for cardiovascular or metabolic disease were recorded. Where height was not recorded, an estimated BMI was calculated using 'average' height for men (1.75m) and women (1.61m).
Table: Weight, BMI and waist circumference recorded on inpatients

Anthropometry	Hospital An=156			Hospital B n=147		
Weight	110 (70.5%)			85 (57.82%)		
Waist circum.	none			none		
BMIs recorded	78 (50%)			14(9.5%)		
BMI category	**BMI≥30**	**BMI≥27**	**BMI<20**	**BMI≥30**	**BMI≥27**	**BMI<20**
Recorded	2415.3%	4126.2%	117.0%	96.1%	10(6.8%)	-
Estimated	95.7%		-	1610.9%	4127.9%	1510.2%

Under-reporting of BMI is common. Length of stay impacted upon weight records: weight was recorded in no patients with <2 days and only 80% with ≥8 days admission. Paradoxically, those with CV or diabetes-related conditions were less likely to have a weight recorded. Waist circumference was not recorded on any patient.
Recognition of overweight and obesity (and also presumably underweight) remains poor in English hospitals.

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Effects of exercise on risk factors, exercise capacity and body composition in obese individuals, class I-III.

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The effects of different exercise intensities in severely obese individuals (mean BMI= 42.1; range 33.3-64.8) were explored. Subjects were randomised into two groups and exercise performed for 16 weeks. Tests were performed prior and after the exercise period.
Both groups performed supervised exercise 3 times a week. A high intensity group (HI, n=51) exercised for 1 hour, and a low intensity group (LO, n=43) for ½ hour, on each occasion. The LO group also performed non-supervised exercise at least 3 times a week.

	High intensity			Low intensity		
	Test 1	Test 2	(n)	Test 1	Test 2	(n)
Weight (kg)	123	120 ***	51	122	120 *	43
BMI ($kg \cdot m^2$)	42	40 ***	51	43	42 **	43
Fat (% of body weight)	46.3	45.0***	51	46.5	46.0 ^{ns}	43
Fat (kg)	54.5	51.6***	51	55.0	53.5 ^{ns}	43
VO_2max ($L \cdot min$)	2.7	2.9 ***	51	2.2	2.3 *	43
VO_2max ($ml \cdot min^{-1} \cdot kg^{-1}$)	22.3	24.8 **	51	18.8	20.1 *	43
BPsyst (mmHg)	153	144***	28#	160	144**	24#
BPdiast (mmHg)	99	90.8**	21#	99	90***	20#
TG (microMol/L)	2104	1656*	26#	1955	1830^{ns}	26#
LDL (mMol/L)	4.8	4.3*	20#	4.8	4.4^{ns}	20#
Glucose (mMol/L)	8.2	7.2^{ns}	13#	9.0	7.0**	9#

Table: Mean values and statistical significance.
Risk factors were evaluated, only for subjects with initially increased levels.
In conclusion, all evaluated parameters were numerically improved in both groups (Table). In the HI group, several parameters improved with greater significance than in the LO group.

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Changes of body weight in outdoor patients - relationship with morbidity and medication during an observation period of 11 years

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Objective: In many overweight and obese patients weight reduction and weight maintenance are difficult to obtain, especially under clinical routine procedures. In addition to counseling programs the diagnosis of metabolic disease or cardiovascular disorders could be of influence on the patient`s motivation to lose body weight.
Methods: Clinical and laboratory results of 3193 patients attending a medical outdoor center were evaluated. Diagnosis and the need for medication were compared between patients with a successful weight loss and those with a continuous weight gain during an observation period of 11 years.
Results: In the female study population (n=1844) the percentage of patients with normal BMI was 46%, with overweight 19%, with obesity 22% and with morbid obesity 2%. In the male study population (n=1349) 44% of the patients revealed a normal BMI, 40% were overweight, 10% obese and 1% morbidly obese. A counseling program comprising dietary instructions and recommendations for physical activity was offered to all overweight and obese patients.
During the following observation period of 11 years, successful and maintained weight loss could be observed in 313 patients with a mean BMI of 26.8±2.6 kg/m^2 at the first visit and 25.2±3.3 kg/m^2 ($p<0.001$) at the latest control. At the initial visit this group of patients with a successful weight loss revealed more unfavourable metabolic results and a higher prevalence of type 2 diabetes (12.5%), hypertension (38%) and coronary heart disease (19%), than the group of 330 patients with a continuous increase in BMI (type 2 diabetes 7.2%, hypertension 25%, coronary heart disease 12%). During the observation period of 11 years the prevalence of diabetes increased for 1.2% in patients with weight loss and for 1.8% in those with weight gain. The increase in cardiovascular medication was 24% in patients with weight loss and 48% in the group with weight gain.
Conclusion: The results of our evaluation indicate that in addition to counseling programs the diagnosis of metabolic or cardiovascular disease might be a strong motivator for patients to lose body weight successfully and to maintain this effect for years.